



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,418	08/04/2006	Neville Hedrick	78500-328434	3618
25764	7590	11/10/2008	EXAMINER	
FAEGRE & BENSON LLP PATENT DOCKETING 2200 WELLS FARGO CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS, MN 55402-3901				ANDRISH, SEAN D
ART UNIT		PAPER NUMBER		
3672				
			MAIL DATE	DELIVERY MODE
			11/10/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/566,418	HEDRICK, NEVILLE
	<b>Examiner</b>	<b>Art Unit</b>
	SEAN D. ANDRISH	3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 - 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1 - 19 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 January 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \*    c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date ____ .	6) <input type="checkbox"/> Other: ____ .

**DETAILED ACTION**

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “cavity” as recited in claim 1, the “breather tube” as recited in claim 6, the "fastening means" as recited in claim 7, the “resin” as recited in claim 8, the “resin dam” as recited in claim 9, the “wedge” as recited in claim 14, and the “rod” as recited in claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 16 is objected to because of the following informalities: Claim 16 lacks a status identifier. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 8, 9, 11 - 13, and 15 – 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Stankus et al. (6,270,290).

Regarding claims 1, 2, 8, 9, 11, 12, 16, 18, and 19, Stankus et al. discloses a cable bolt comprising: a cable (14) comprised of multiple strands; a plurality of bulbous portions (24, 26, 28, 30) encased in resin (72); a resin dam (resin compactor 36); a bulb diameter of the bulbous portions varies along the length of the bolt; a rigid element (nut/washer 32); and minimal clearance between the outermost surface of the rigid element and a broadest part of a cavity of the bulbous portion (Figs. 3 and 5; column 4, lines 60 – 66; column 5, lines 11 - 17).

Regarding claims 13, 15, and 17, Stankus et al. further discloses forming a bulbous section (birdcage 24, 26, 28, 30) by using a spreading tool to separate the central strand from the surrounding strands and placing a nut or washer over an end of the central strand (column 5, lines 48 – 60). Examiner notes that there will inherently be tension between the outer strands that would encourage the strands to return to their original configuration. Examiner considers the central strand to be functionally equivalent to a rod.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al.

Regarding claim 3, Stankus et al. discloses all of the limitations of the above claim(s) except for variable bulb frequency. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the bolt as disclosed by Stankus et al. to include a bulb frequency of the bulbous portions that varies along the length of the bolt as a matter of design choice within the skill of the art.

Regarding claim 5, Stankus et al. discloses all of the limitations of the above claim(s) except for the minimal clearance between an outermost surface of the rigid element and the broadest part of a cavity of the bulbous portion. The optimization of proportions in a prior art device is a design consideration within the skill of the art. In re Reese, 290 F.2d 839, 129 USPQ 402 (CCPA 1961).

6. Claims 4, 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al. in view of McLean (3,332,244).

Regarding claim 4, Stankus et al. discloses all of the limitations of the above claim(s) except for the rigid element is a solid sphere. McLean teaches a rigid ball (21) located within a bulbous section of a bolt (Fig. 3; column 6, lines 2 – 4) to improve the transfer of stress between

the bolt and the surrounding rock. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the structure as disclosed by Stankus et al. with the solid sphere as taught by McLean to improve the transfer of stress between the bolt and the surrounding rock.

Regarding claim 6, Stankus et al. discloses all of the limitations of the above claim(s) except for a breather tube. McLean teaches a breather tube (column 4, line 73 – column 5, line 1) to allow air to escape from holes being filled. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the structure as disclosed by Stankus et al. with the breather tube as taught by McLean to allow air to escape from holes being filled.

Regarding claim 7, Stankus et al. in view of McLean discloses all of the limitations of the above claim(s) except for a fastening means. Examiner notes that a tension reinforcing member (bolt) having one or more breather tubes would obviously require a means to fasten the breather tubes to the other components of the tension reinforcing member.

Regarding claim 10, Stankus et al. discloses all of the limitations of the above claim(s) except for a bulbous portion encased in silicon and shrinkwrapped in polyethylene. McLean teaches a polyethylene rod (22) covered in glass fibers (23) for reinforcing a rock structure (column 6, lines 2 – 6) to improve the transfer of stress between the rod and the resin surrounding the rod. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the structure as disclosed by Stankus et al. with the composition of the rock support rod as taught by McLean to improve the transfer of stress between the rod and the resin surrounding the rod.

7. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al. in view of McVittie (3,091,990). Stankus et al. discloses all of the limitations of the above claim(s) except for the spreader is a wedge. McVittie teaches using a wedge (30) to spread the stands (16) of a multi-strand cable (Figs. 2 and 3; column 2, lines 63 – 69) to allow an object to be inserted between the strands of the multi-strand cable. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the structure disclosed by Stankus et al. with the wedge as taught by McVittie to allow an object to be inserted between the strands of a multi-strand cable.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Castle et al. (5,699,572) teaches a cable spreader.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN D. ANDRISH whose telephone number is (571)270-3098. The examiner can normally be reached on Mon - Fri, 7:30am - 5:00pm, Alternate Fri off, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Kreck/  
Primary Examiner, Art Unit 3672

SDA  
11/6/2008